



IL6

PENTAGRID CONVERTER

MINIATURE TYPE

GENERAL DATA

Electrical:

Filament, Coated:

Voltage 1.4 dc volts

Current 0.050 amp

Direct Interelectrode Capacitances:

	With External Shield [▲]	Without External Shield	
Grid No.4 to All Other Electrodes (RF Input) . . .	7.5	7.5	μf
Plate to All Other Electrodes (Mixer Output) .	12	7	μf
Grid No.1 to All Other Electrodes Except Grid No.2 (Osc. Input)	2.2	2.2	μf
Grid No.2 to All Other Electrodes Except Grid No.1 (Osc. Output)	2.6	2.6	μf
Grid No.4 to Plate	0.36 max.	0.46 max.	μf
Grid No.4 to Grid No.2 . . .	0.24	0.24	μf
Grid No.4 to Grid No.1 . . .	0.19	0.19	μf
Grid No.2 to Grid No.1 . . .	0.80	0.80	μf
Grid No.1 to Plate	0.10 max.	0.15 max.	μf

Mechanical:

Mounting Position Any

Maximum Overall Length 2-1/8"

Maximum Seated Length 1-7/8"

Length from Base Seat to

Bulb Top (excluding tip) 1-1/2" \pm 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

Base Small-Button Miniature 7-Pin (JETEC No.E7-1)

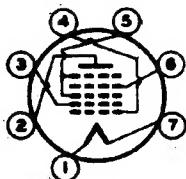
Basing Designation for BOTTOM VIEW 7DC

Pin 1-Filament (-)

Pin 2-Plate

Pin 3-Grid No.2

Pin 4-Grid No.1



Pin 5-Grid No.3,

Grid No.5

Pin 6-Grid No.4

Pin 7-Filament (+)

CONVERTER

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 110 max. volts

GRIDS-No.3 & No.5 (SCREEN) VOLTAGE 65 max. volts

[▲] External shield #316 connected to pin 1.

AUG. 1, 1953

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA

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PENTAGRID CONVERTER

GRIDS-No.3 & No.5 SUPPLY VOLTAGE	110 max.	volts
GRID-No.2 (OSCILLATOR-PLATE) VOLTAGE	110 max.	volts
TOTAL CATHODE CURRENT	4 max.	ma

Characteristics - Separate Excitation:*

Plate Voltage	90	volts
Grids-No.3-and-No.5 Voltage	45	volts
Grid-No.2 (Oscillator-Plate) Voltage	90	volts
Grid-No.4 (Mixer-Grid) Voltage	0	volts
Grid-No.1 (Oscillator-Grid) Resistor	0.2	megohm
Plate Resistance (Approx.)	0.65	megohm
Conversion Transconductance	300	μ mos
Grid-No.4 Voltage for Conversion Transconductance of 10 μ mos	-3.5	volts
Grid-No.4 Voltage for Conversion Transconductance of 100 μ mos	-1.3	volts
Plate Current	0.5	ma
Grids-No.3-and-No.5 Current	0.6	ma
Grid-No.2 Current	1.2	ma
Grid-No.1 Current	0.035	ma
Total Cathode Current	2.35	ma

Maximum Circuit Values:

Grid-No.4-Circuit Resistance	1.0 max.	megohm
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NOTE: The transconductance between grid No.1 and grid No.2 connected to plate (not oscillating) is approximately 550 μ mos under the following conditions: signal applied to grid No.1 at zero bias; grid No.2 and plate at 90 volts; grids No.3 and No.5 at 45 volts; grid No.4 grounded. Under the same conditions, the total cathode current is 5 milliamperes, and the amplification factor is 40.

* The characteristics shown under separate excitation approximate those obtained in a self-excited oscillator operating with zero bias.

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